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## **MAGNETIC CALIBRATION FACILITY COMPLETED FOR NAVY PRIMARY STANDARDS LABORATORY**

The installation of the magnetic field calibration facility at the Navy Primary Standards Laboratory (NPSL), San Diego, CA, was completed by a NIST scientist. Navy personnel were trained in its operation at both NPSL and at NIST. The NPSL now has the capability to calibrate dc magnetic field measuring instruments from microtesla to 1.4 tesla based on nuclear magnetic resonance (NMR) measurements, which makes their calibrations traceable to NIST. Three axis Helmholtz coils and a precision Pyrex solenoid provide 0.1 % measurements to about 0.1 mT and 0.001 % measurements to about 1.2 mT, respectively. The Helmholtz coils compensate for and reduce the effect of the Earth's magnetic field when using the precision solenoid. Another set of Helmholtz coils can be used for the 1 mT to 10 mT range with 0.1 % capability. An electromagnet and NMR system provide much higher precision for the 40 mT to 1.4 T range. The completed transfer of this system ensures that U.S. dc magnetic field calibration needs can be met by NPSL since NIST no longer provides this service.